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George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

ED43

CONFIGURATION AND DATA MANAGEMENT GROUP

ENGINEERING ORDER (EO) NUMBER REQUEST AND TRENDING SYSTEM USER'S MANUAL

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED

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Title: Engineering Order (EO) Number Request and Trending System User's Manual	Document No.: MSFC-MNL-3427	Revision: Baseline
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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		09/28/2004	Approved by ED43 Automation Board on 09/28/2004.

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1. SCOPE/PURPOSE

The Engineering Order (EO) Number Request and Trending System User's Manual provides instructions to system users. An EO is required to document changes to a released drawing or parts list in accordance with the MSFC-STD-555. The purpose of the EO Number Request and Trending System is to collect metrics about the reason(s) for changes to released design. The design organization's management can then utilize these metrics to report to higher management and implement corrective action for systemic problem areas. To encourage use and make the system value-added for EO initiators, the system provides the capability for EO initiators to generate an on-line EO number request and receive the assigned EO number by email. Pre-assignment of EO numbers is required by MSFC-STD-555 to ensure that the same EO number is not utilized by different initiators. Any MSFC on-site personnel with a web browser can generate an EO number request or obtain reports from the system.

2. APPLICABLE DOCUMENTS

MSFC-STD-555 MSFC Engineering Document Standard

3. DEFINITIONS/ACRONYMS

CR Change Request

EO Engineering Order - An EO serves as an auxiliary to a previously released drawing and provides advance notice of a design or documentation change or correction to be made to a drawing.

ICMS Integrated Configuration Management System

RD Release Desk

4. PROCESS

The EO Number Request and Trending System allows any person at MSFC to generate an on-line EO number request. The request is routed to the MSFC Release Desk (RD). The MSFC Release Desk personnel reserve the EO number in the Integrated Configuration Management System (ICMS), and then enter the EO number into the EO Number Request and Trending System. The EO Number Request and

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Trending System then generates an email back to the requestor with the EO number. The process flow of the MSFC Engineering Order Number Request and Trending System is shown in Figure 1. The solid lines indicate areas accessed by the users. The dashed line areas indicate the Release Desk administrative function.

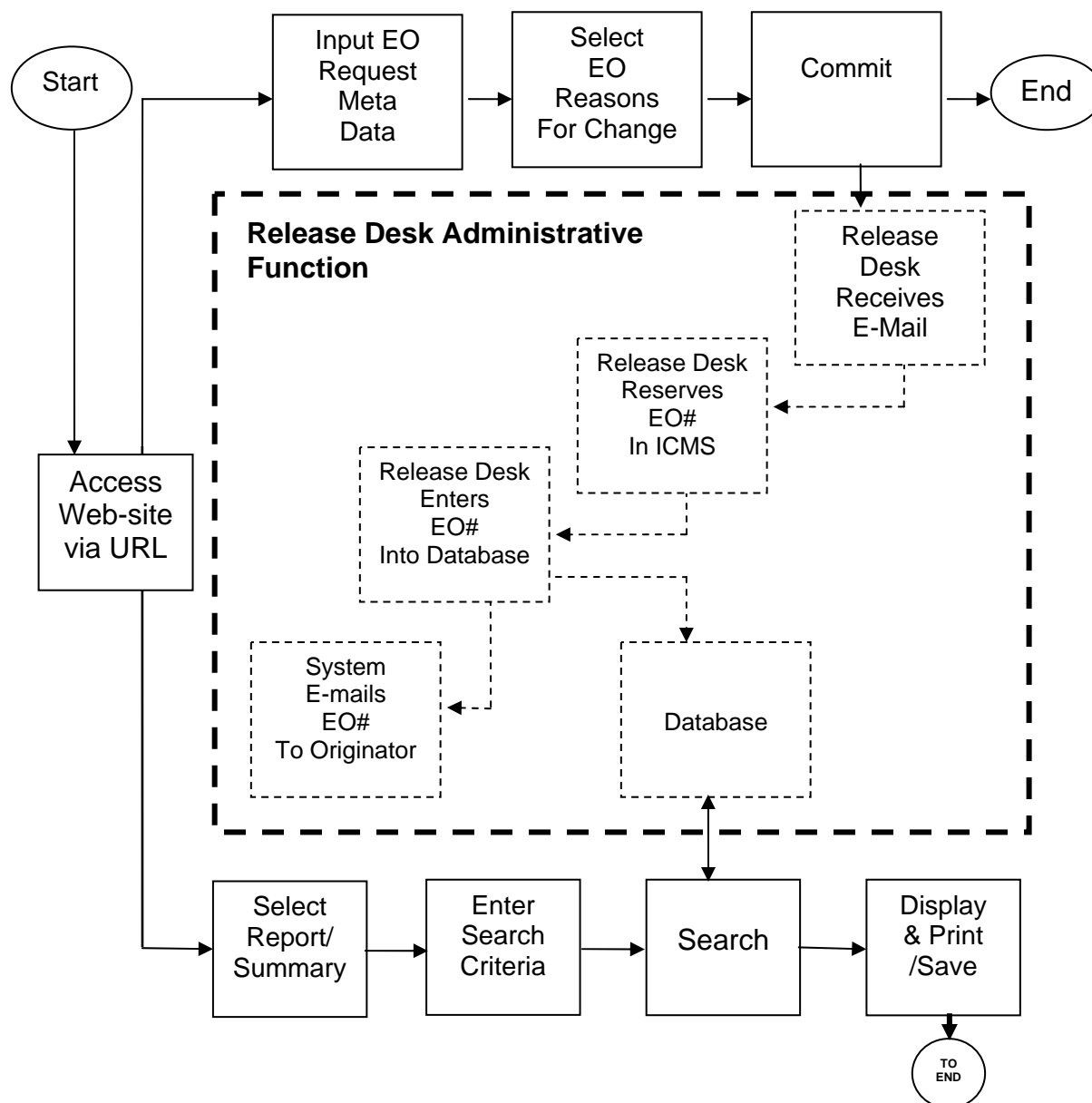


Figure 1. Process Flow of EO Number Request System

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5. SYSTEM USAGE

This section of the User's Guide is intended to assist users in performing system functions.

The following general user functions are described in this section:

- a. URL
- b. Main Menu
- c. User Request Input
- d. User Request Report of EO's
- e. User Request Summary of EO's
- f. Sample of the EO Report

5.1 URL

The Uniform Resource Locator (URL) provides access to the EO Request and Trending System homepage.

The URL is:

<https://masterlist.msfc.nasa.gov/eo/>

5.2 MAIN MENU

Access to the system via this URL will display the Main Menu of the EO Number Request and Trending System as shown in Figure 2.

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EO NUMBER REQUEST & TRENDING SYSTEM

INPUT

- [Request EO Number](#)

REPORT

- [Report of EO's](#)
- [Summary Report of EO's](#)

Responsible Official: [Toan Vu](#)

Author, Curator: [Gary McGriff](#)

User Help Contacts:

Primary: [Gary McGriff](#)

Secondary: MSFC Release Desk (b)(4)

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Figure 2. Main Menu of EO Number Request and Trending System

5.3 USER REQUEST INPUT

Clicking on the Input link on the main menu to request an EO number will display the page shown in Figure 3 for the user to input metadata.

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EO NUMBER REQUEST & TRACKING SYSTEM - MSFC - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media

Address http://esddev2.msfc.nasa.gov/EO/input_request1_new.taf Go Links

Complete form below to request an EO Number.

INFORMATION	
First Name:	<input style="width: 90%;" type="text"/>
Last Name:	<input style="width: 90%;" type="text"/>
E-Mail:	<input style="width: 90%;" type="text"/>
Org:	<input style="width: 90%;" type="text"/>
Package Number:	<input style="width: 90%;" type="text"/>
Project Code:	<input style="width: 90%;" type="text"/>
Part Number:	<input style="width: 90%;" type="text"/>
Change Description:	<div style="color: red; font-weight: bold; font-size: small;">No sensitive information is to be entered into this comment block.</div> <div style="border: 1px solid black; height: 40px; width: 95%; margin-top: 5px;"></div>

Select as many items below as apply.	
<input type="checkbox"/> Customer Request	Description: A change to implement a request from the immediate customer.
<input type="checkbox"/> Project Requirements Change	Description: A change resulting from a modification to the Project design requirements.
<input type="checkbox"/> Design Correction	Description: A change to correct an oversight by the design engineer.
<input type="checkbox"/> Design Evolution	Description: A change resulting from the natural evolution process of the design.
<input type="checkbox"/> Documentation Error	Description: A change to correct an editorial or typographical error.
<input type="checkbox"/> Checking Oversight	Description: A change to correct a drafting or MSFC-STD-555 compliance error that should have been identified during drawing checking review.
<input type="checkbox"/> Inspectability Oversight	Description: A design change implemented to enable the hardware to be inspected to the design documentation - this type of change should have been identified during the Inspectability review.
<input type="checkbox"/> Producibility Oversight	Description: A design change implemented to enable the hardware to be manufactured/assembled to the design documentation - this type of change should have been identified during the Producibility review.
<input type="checkbox"/> Manufacturing Request	Description: A change to implement a manufacturing request that eases the manufacturing and/or assembly process.
<input type="checkbox"/> Parts or Material Availability	Description: A change to substitute another part or base material of equal or greater value that is available in stock for the originally specified part (material). This is required because the originally specified part (material) is not currently in stock.
<input type="checkbox"/> Tabular Drawing	Description: A change to tabulated drawing (drawing which is tabulated to delineate similar items which as a group, have some common characteristics and some variable features).
<input type="checkbox"/> Other	Description: Describe reason for change in Change Description block.

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Figure 3. User's Metadata Request Form

Following the completion of the metadata input, the originator is requested (on the screen shown in Figure 3) to select reasons to indicate why the change is needed. Then click the submit button to commit the input to the database and request an EO number from the Release Desk. A screen will then appear confirming that the record was successfully added. The user may make another request by clicking the Submit Similar EO button to make a similar EO request from the existing record or may click the Submit New EO button to reset for a new blank request. (See figure 4.)

Figure 4. Create a similar request or a new blank request

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5.4 RELEASE DESK ENTRY OF THE EO NUMBER

Once the Release Desk receives the E-mail with requestor's metadata and reasons for change, the Release Desk will reserve the EO number in ICMS. As an administrative function the EO number is entered into the trending database as shown in Figure 5, then the system will e-mail the EO number to the requestor.

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Address: http://esddev2.msfc.nasa.gov/ea/assign_eo_numbers.taf

There are 31 matching records.

Assign EO Number	Name		Cust Org		Package #		Cust E-Mail		Project Code		Part Number	
	Customer Request	Project Requirements Change	Design Correction	Design Evolution	Documentation Error	Checking Oversight	Inspectability Oversight	Producibility Oversight	Manufacturing Request	Parts or Material Availability	Tabular Drawing	Other
	Change Description											
	Timothy Dowling		ED23				Timothy.E.Dowling@nasa.gov		RM		96M23099-1	
	No	No	No	No	No	No	No	No	Yes	No	No	No
	Change material for the widgets and thing-a-majigs.											
	Timothy Dowling		ED23				Timothy.E.Dowling@nasa.gov		RM		96M23099-3	
	No	No	No	No	No	No	No	No	Yes	No	No	No
	Change material for the widgets and thing-a-majigs.											
	Timothy Dowling		ED23				Timothy.E.Dowling@nasa.gov		RM		96M23099-5	
	No	No	No	No	No	No	No	No	Yes	No	No	No
	Change material for the widgets and thing-a-majigs.											
	Timothy Dowling		ED23		99999		Timothy.E.Dowling@nasa.gov		RX		97M23017-1	
	Yes	Yes	No	Yes	No	No	No	No	No	No	No	No
	Just a test to see the changes in the system.											
	Timothy Dowling		ED23				Timothy.E.Dowling@nasa.gov		RM		96M23011-1	
	No	No	No	No	No	No	No	No	No	No	No	Yes
	Just a test.											
	Timothy Dowling		ED23				Timothy.E.Dowling@nasa.gov		RM		96M23011-1	
	No	Yes	No	No	No	No	No	No	No	No	No	No
	Just a test. Don't send a number.											

Save Reset Values

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Responsible Official/Curator

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Figure 5. Release Desk's Trending Database Screen

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5.5 USER REQUEST REPORT OF EO's

The report capability of the EO System allows users to generate both a predefined report and a summary report. A predefined report provides basic information in fixed format. The user has restricted means for limiting the records to be included in the predefined report and for sorting the found records.

Clicking the Report of EO's link on the main menu will display the page shown in Figure 6 for the user to enter search criteria for the EO report.

ENTER SEARCH CRITERIA BELOW

Last Name:	
Org:	
Package Number:	
Beginning Date:	Ending Date:
Project Code:	
Part Number: <small>(To get a listing of all part numbers from one drawing, enter just the drawing number here.)</small>	
EO Number:	
<small>In evaluating the following search criteria, add the word "and" or "or" after each item selected. Example: Selecting "List of Any Checked", "Design Change" and "Design Process" should be interpreted as listing of all entries that include "Design Change" OR "Design Process". Example: Selecting "List of All Checked", "Design Change" and "Design Process" should be interpreted as listing of all entries that include "Design Change" AND "Design Process".</small>	
<input checked="" type="radio"/> List of Any Checked <small>*(OR)</small>	
<input type="radio"/> List of All Checked <small>*(AND)</small>	
<input type="checkbox"/> Customer Request*	
<input type="checkbox"/> Project Requirements Change*	
<input type="checkbox"/> Design Correction*	
<input type="checkbox"/> Design Evolution*	
<input type="checkbox"/> Documentation Error*	
<input type="checkbox"/> Checking Oversight*	
<input type="checkbox"/> Inspectability Oversight*	
<input type="checkbox"/> Producibility Oversight*	
<input type="checkbox"/> Manufacturing Request*	
<input type="checkbox"/> Parts or Material Availability*	
<input type="checkbox"/> Tabular Drawing*	
<input type="checkbox"/> Other*	
Search	Reset Form

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Figure 6. Menu of Search Criteria for EO Report

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5.6 USER REQUEST SUMMARY REPORT OF EO'S

Clicking the Summary Report of EO's link on the main menu will display the page shown in Figure 7 for users to enter search criteria. Complete only the fields which you desire to be part of the search criteria.

ENTER SEARCH CRITERIA BELOW

Last Name:	<input type="text"/>
Org:	<input type="text"/>
Package Number:	<input type="text"/>
Beginning Date:	Ending Date:
<input type="text"/>	<input type="text"/>
Project Code:	<input type="text"/>
Part Number: (To get a listing of all part numbers from one drawing, enter just the drawing number here.)	<input type="text"/>
EO Number:	<input type="text"/>

Figure 7. Menu of Search Criteria for EO Summary Report

5.7 SAMPLE OF THE EO REPORT

A sample of the EO report is shown in Figure 8.

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EO NUMBER REPORT

There is 1 matching record.

Engineer/Designer: Gary McGriff	Org: ED43	Project Code: SL1	EO #:	Part #: pn
		Org, If Other: ED23	Dwg #: dn	Date: 02/19/2004
Change Description: cd				
<input checked="" type="checkbox"/> Checked Customer Request	<input checked="" type="checkbox"/> Checked Project Requirements Change	<input checked="" type="checkbox"/> Checked Design Correction	<input checked="" type="checkbox"/> Checked Design Evolution	<input checked="" type="checkbox"/> Checked Documentation Error
<input checked="" type="checkbox"/> Checked Inspectability Oversight	<input checked="" type="checkbox"/> Checked Producibility Oversight	<input checked="" type="checkbox"/> Checked Manufacturing Request	<input checked="" type="checkbox"/> Checked Parts or Material Availability	<input checked="" type="checkbox"/> Checked Tabular Drawing
				<input checked="" type="checkbox"/> Checked Checking Oversight
				<input checked="" type="checkbox"/> Checked Other
<input checked="" type="checkbox"/> line				

List All

New Search

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Figure 8. Sample of EO Report